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INTERNATIONAL APPLICATION NO.
PCT/JP99/07173INTERNATIONAL FILING DATE
21 December 1999 (21.12.99)PRIORITY DATE CLAIMED
21 December 1998 (21.12.98)TITLE OF INVENTION
HYPERTEXT DISPLAY APPARATUS

APPLICANT(S) FOR DO/EO/US SHIN, Hidehiko; HISHIDA, Toshihiro; TANAKA, Yasunori; KATO, Atsunobu; NAKATSUCHI, Masaharu; OOSEKI, Eriko

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☐ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☐ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☒ has been transmitted by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ have been transmitted by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☒ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A **FIRST** preliminary amendment.
☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information:
Copy of the International Search Report.

"Express Mail" mailing label number EL633643980USDate of Deposit 8/21/00

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Paula Almasz

Printed Name of Person Mailing Paper or Fee

Signature of Person Mailing Paper or Fee

17. ☒ The following fees are submitted:**BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :**

Neither international preliminary examination fee (37 CFR 1.482)
nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO
and International Search Report not prepared by the EPO or JPO \$970.00

International preliminary examination fee (37 CFR 1.482) not paid to
USPTO but International Search Report prepared by the EPO or JPO \$840.00

International preliminary examination fee (37 CFR 1.482) not paid to USPTO but
international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$690.00

International preliminary examination fee paid to USPTO (37 CFR 1.482)
but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$670.00

International preliminary examination fee paid to USPTO (37 CFR 1.482)
and all claims satisfied provisions of PCT Article 33(1)-(4) \$96.00

ENTER APPROPRIATE BASIC FEE AMOUNT =**CALCULATIONS** PTO USE ONLY

\$ 840.00

Surcharge of \$130.00 for furnishing the oath or declaration later than ☒ 20 ☐ 30
months from the earliest claimed priority date (37 CFR 1.492(e)).

\$ 130.00

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE
Total claims	8 - 20 =	0	X \$18.00
Independent claims	4 - 3 =	1	X \$78.00
MULTIPLE DEPENDENT CLAIM(S) (if applicable)			+ \$260.00

\$ 78.00

\$ -0-

TOTAL OF ABOVE CALCULATIONS =

\$ 1,048.00

Reduction of 1/2 for filing by small entity, if applicable. A Small Entity Statement
must also be filed (Note 37 CFR 1.9, 1.27, 1.28).

\$ -0-

SUBTOTAL =

\$ 1,048.00

Processing fee of \$130.00 for furnishing the English translation later than ☐ 20 ☐ 30
months from the earliest claimed priority date (37 CFR 1.492(f)).

\$ -0-

TOTAL NATIONAL FEE =

\$ 1,048.00

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be
accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +

\$ -0-

TOTAL FEES ENCLOSED =

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Amount to be

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\$

a. ☒ A check in the amount of \$ 1,048.00 to cover the above fees is enclosed.b. ☐ Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees.
A duplicate copy of this sheet is enclosed.c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any
overpayment to Deposit Account No. 16-0820. A duplicate copy of this sheet is enclosed.
Our Order No. 32908

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO

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27676

REGISTRATION NUMBER

09/622662
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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Hidehiko Shin et al.
Serial No.: N/A Art Unit: N/A
Filing Date: Herewith
International
Application No.: PCT/JP99/07173
International
Filing Date: December 21, 1999

Title: HYPERTEXT DISPLAY APPARATUS
Examiner: N/A
Docket No.: 32908

PRELIMINARY AMENDMENT "A"

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Please amend the above-identified application, prior to
examination thereof, in the following manner.

Express Mail Label No. EL633643980US

IN THE CLAIMS:

1 3. (amended) The hypertext display apparatus
2 according to claim 1 [or 2], wherein said selection means
3 is a means for allowing a user to depress a button/key
4 thereby to select an anchor on the hypertext.

1 4. (amended) The hypertext display apparatus
2 according to claim 1 [or 2], wherein said selection means
3 is a means for allowing a user to select an anchor on a
4 hypertext by utilizing audio.

1 7. (new) The hypertext display apparatus according
2 to claim 2, wherein said selection means is a means for
3 allowing a user to depress a button/key thereby to select
4 an anchor on the hypertext.

1 8. (new) The hypertext display apparatus according
2 to claim 2, wherein said selection means is a means for
3 allowing a user to select an anchor on a hypertext by
4 utilizing audio.

REMARKS

If there are any additional fees resulting from this communication not covered by the enclosed check, or if the check was omitted, please charge all uncovered fees to our Deposit Account No. 16-0820, our Order No. 32908.

Respectfully submitted,

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By  _____
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August 21, 2000

5/PRAS

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DESCRIPTION

HYPERTEXT DISPLAY APPARATUS

Technical Field

The present invention relates to a hypertext display apparatus, and more particularly to a hypertext display apparatus enabled to move focus to a location of anchor information, which a user wishes to select, of a hypertext document.

Background Art

A conventional hypertext display apparatus is adapted to move focus to a location of anchor information, which a user wishes to select, of a hypertext document to thereby select this anchor information.

A hypertext document (or HTML document) is a document coded with HyperText Markup Language. Tags indicate layout information. A browser shows HTML documents by interpreting such tags. Additionally, texts, images, and audio can be inserted into an HTML document. Moreover, an HTML document can be linked to an image or to another HTML document. A location, at which the destination of a link is shown, is referred to as an "anchor point". A figure indicating an anchor point is referred to as an anchor. When various kinds of anchor points

are set in an HTML document, focus can easily be moved to a location linked to an anchor point.

Pointing an anchor point on a display screen by a mouse cursor or the like is referred to as "selecting an anchor point". A plurality of anchor points on an HTML document are sometimes designated in sequence by using a movement key provided on a remote controller. Moving a pointer to an anchor point in this way is referred to as "focusing". The location of an anchor point focused on a currently displayed HTML document is referred to as a "focus location".

In recent years, with downsizing of devices, anchor information has come to be controlled on a small screen by utilizing attributes included therein. The official gazette No. JP-A-10-293767 discloses a display control method for skipping a specific anchor point at the time of issuing instructions to move focus to anchor points. This method is to forwardly or backwardly move focus to a plurality of anchor points contained in an HTML document in sequence by skipping an anchor point, to which a focus skipping attribute is added, without focusing, during moving focus.

However, in the conventional hypertext display apparatus, an anchor, which a user wishes to select, should be selected by moving focus to a location of this anchor. In the case of a personal digital assistant that has a small screen and a simple selection unit, there is the necessity for operating the

personal digital assistant many times so as to move focus to an anchor, which a user wishes to select. Thus, the conventional hypertext display apparatus has a drawback in inconvenience for a user.

An object of the present invention is to eliminate the drawback of the conventional device and to provide a hypertext display apparatus enabled to select a target anchor by a single operation.

Disclosure of Invention

To eliminate the drawback, according to the present invention, there is provided a hypertext document display apparatus for displaying a hypertext document, which comprises display means for displaying a hypertext document, selection means for selecting an anchor on a hypertext document according to an instruction from a user, analysis means for analyzing a hypertext document and for extracting anchor information, attribute selection judgment means for judging according to outputs of the selection means and the analysis means whether or not an anchor having an attribute corresponding to the selection means is selected, attribute activation judgment means for judging according to an output of the attribute selection judgement means whether or not an anchor having an attribute corresponding to the selection means is activated, and acquisition means for acquiring from a server data, which

is indicated by the anchor information, according to an output of the attribute activation judgement means.

With such a configuration, data can be displayed by selecting only an anchor corresponding to the selection means.

Further, this hypertext document display apparatus of the present invention may have focus moving means for moving focus to a location in a hypertext document, which is designated by anchor information selected by the selection means. With such a configuration, focus can be moved only to the location of the anchor corresponding to the selection means.

Moreover, the selection means may be means for allowing a user to select an anchor on a hypertext by depressing a button/key. With such a configuration, only the anchor corresponding to the button/key can be selected.

Furthermore, the selection means may be means for allowing a user to select an anchor on a hypertext by utilizing audio. With such a configuration, only the anchor corresponding to an audio command.

Moreover, the hypertext document display apparatus of the present invention may further comprise button/key selection means for selecting an anchor on a hypertext document according to an instruction from a user, attribute automatic-addition judgment means for judging, in a case that no anchor has a button/key selection attribute, whether or not a button/key selection attribute is added to anchor information of a

hypertext document, attribute automatic-addition means for automatically adding button/key selection attributes to anchor information of a hypertext document in sequence from a top portion thereof according to an output of the attribute automatic-addition judgement means, and attribute selection judgement means for judging according to outputs of the analysis means and the button/key selection means whether or not an anchor having a button/key selection attribute is selected.

With such a configuration, attributes corresponding to buttons/keys are selectively imparted to anchors. Thus, only the anchors corresponding to the button/key can be selected.

Furthermore, the hypertext document display apparatus of the present invention may further comprise attribute automatic-addition means for automatically adding button/key attributes to anchor information of a hypertext document in the order in which anchors are displayed. With such a configuration, only the anchors corresponding to the buttons/keys can be selected in the order in which the anchors are displayed.

According to an aspect of the present invention, there is provided a hypertext display apparatus for displaying a hypertext document, which comprises display means for displaying the hypertext document, selection means for selecting an anchor on the hypertext document according to an instruction from a user, analysis means for analyzing the hypertext document and for extracting anchor information,

attribute selection judgment means for judging according to outputs of the selection means and the analysis means whether or not an anchor having an attribute corresponding to the selection means is selected, attribute activation judgment means for judging according to an output of the attribute selection judgement means whether or not an anchor having an attribute corresponding to the selection means is activated, and acquisition means for acquiring from a server data, which is indicated by the anchor information, according to an output of the attribute activation judgement means. Further, this hypertext document display apparatus has effects of selecting only an anchor corresponding to the selection means, and judging whether or not an attribute corresponding thereto is activated, and acquiring data from the server.

Furthermore, according to another aspect of the present invention, there is provided a hypertext display apparatus for displaying a hypertext document, which comprises display means for displaying the hypertext document, selection means for selecting an anchor on the hypertext document according to an instruction from a user, analysis means for analyzing the hypertext document and for extracting anchor information, attribute activation judgment means for judging according to outputs of the selection means and the analysis means whether or not an anchor having an attribute corresponding to the selection means is activated, and focus moving means for moving

focus to a location in a hypertext document, which is designated by anchor information selected by the selection means. Thus, the hypertext display apparatus has effects of moving focus only to the location of the anchor corresponding to the selection means.

Further, in the aforementioned hypertext display apparatus, the selection means may be means for allowing a user to depress a button/key thereby to select an anchor on the hypertext. Thus, the hypertext display apparatus has effects of selecting only an anchor corresponding to the button/key, and judging whether or not an attribute corresponding thereto is activated, and acquiring data from the server.

Moreover, in the aforementioned hypertext display apparatus, the selection means may be means for allowing a user to select an anchor on a hypertext by utilizing audio. Thus, the hypertext display apparatus has effects of selecting only the anchor corresponding to an audio command, moving focus and judging whether or not an attribute corresponding thereto is activated, and acquiring data from the server.

Furthermore, according to another aspect of the present invention, there is provided a hypertext display apparatus for displaying a hypertext document, which comprises display means for displaying the hypertext document, button/key selection means for selecting an anchor on the hypertext document according to an instruction from a user, analysis means for

analyzing the hypertext document and for extracting anchor information, attribute automatic-addition judgment means for judging, in a case where it is found as a result of the analysis that no anchor has the button/key selection attribute, whether or not the button/key selection attribute is added to anchor information of a hypertext document, attribute automatic-addition means for automatically adding button/key selection attributes to anchor information of the hypertext document in sequence from a top portion thereof according to an output of the attribute automatic-addition judgement means, and attribute selection judgement means for judging according to outputs of the analysis means and the button/key selection means whether or not an anchor having a button/key selection attribute is selected. Thus, this hypertext display apparatus has effects of selectively imparting attributes corresponding to buttons/keys to anchors thereby to be enabled to select only the anchors corresponding to the button/key.

Further, according to another aspect of the present invention, there is provided a hypertext display apparatus for displaying a hypertext document, which comprises display means for displaying the hypertext document, button/key selection means for selecting an anchor on the hypertext document according to a button/key instruction issued by a user, analysis means for analyzing the hypertext document and for extracting anchor information, attribute automatic-addition judgment

means for judging, in a case where it is found as a result of the analysis that no anchor has the button/key selection attribute, whether or not the button/key selection attribute is added to anchor information of the hypertext document, attribute automatic-addition means for automatically adding button/key selection attributes to anchor information of the hypertext document in the order, in which anchors are displayed, according to a result of a judgement by the attribute automatic-addition judgement means, and attribute selection judgement means for judging according to outputs of the analysis means and the button/key selection means whether or not anchor information, which includes information corresponding to the selection means, is selected. Thus, this hypertext display apparatus has effects of selectively imparting attributes corresponding to buttons/keys to anchors in the order, in which the anchors are displayed, thereby to be enabled to select only the anchors corresponding to the button/key.

Brief Description of Drawings

FIG. 1 is a block diagram illustrating a hypertext display apparatus that is a first embodiment of the present invention;

FIG. 2 is a diagram illustrating a sequence of steps to be performed by the hypertext display apparatus that is the first embodiment of the present invention;

FIG. 3 is a flowchart illustrating an attribute selection

judgement process performed in the hypertext display apparatus that is the first embodiment of the present invention;

FIG. 4 is a flowchart illustrating an attribute activation judgement process performed in the hypertext display apparatus that is the first embodiment of the present invention;

FIG. 5 is a block diagram illustrating a hypertext display apparatus that is a second embodiment of the present invention;

FIG. 6 is a diagram illustrating a sequence of steps to be performed by the hypertext display apparatus that is the second embodiment of the present invention; and

FIG. 7 is a flowchart illustrating an attribute automatic-addition judgement process performed in the hypertext display apparatus that is the second embodiment of the present invention.

Best Mode for Carrying out the Invention

Hereinafter, embodiments of the present invention will be described in detail by referring to FIGS. 1 to 7.

First Embodiment

A first embodiment of the present invention is a hypertext display apparatus adapted to display a hypertext document, and to select an anchor on the hypertext document according to an instruction from a user, and to analyze the hypertext document, and extract anchor information therefrom, and to acquire from a server data, which is indicated by the anchor information,

in the case that an anchor corresponding to the selection means is selected and activated.

FIG. 1 is a block diagram illustrating a hypertext display apparatus that is the first embodiment of the present invention. In FIG. 1, the hypertext display apparatus 101 is operative to analyze and display a hypertext document. Analysis means 102 is operative to analyze a hypertext document. Selection means 103 is operative to select anchor information included in a hypertext document. Display means 104 is operative to display a hypertext document according to results of analysis and attribute selection judgement. Attribute selection judgement means 105 is operative to according to judge according to a result of analysis whether or not anchor information including an attribute, which has information corresponding to the selection means, is selected. Attribute activation judgment means 106 is operative to judge according to a result of attribute selection whether or not anchor information including an attribute, which has information corresponding to the selection means, is activated. Acquisition means 107 is operative to acquire data, which is indicated by anchor information, from a server according to a result of attribute activation judgement. Focus moving means 108 is operative to moving focus indication to a location on a hypertext document, which is indicated by anchor information, according to a result of attribute activation judgement. A server 109 is operative

to provide data.

The hypertext display apparatus 101 is adapted so that a hypertext document is analyzed by the analysis means 102 and displayed by the display means 104. The analysis means 102 analyzes a hypertext document. The selection means 103 selects anchor information included in a hypertext document. The attribute selection judgement means 105 judges according to a result of analysis performed by the analysis means 102 whether or not anchor information including attributes, which have information corresponding to the selection means 103, is selected. The display means 104 displays a hypertext document according to results of operations by the analysis means 102 and the attribute selection judgement means 105. The attribute activation judgement means 106 judges according to a result of an operation performed by the attribute selection means 105 whether or not anchor information including an attribute, which has information corresponding to the selection means. The focus moving means 108 moves the indication of focus to a location, which is designated by anchor information, on a hypertext document. The acquisition means 107 acquires data, which is represented by the anchor information, from the server 109 according to a result of judgement by the attribute activation judgement means 106.

An operation of the hypertext display apparatus, which is constituted as described above, and which is the first

embodiment of the present invention, will be described by using a sequence diagram of FIG. 2. The hypertext display apparatus 301 performs an analysis process on a hypertext document (step 302), and displays a hypertext document.

In a display process (step 303), a hypertext document is displayed according to a result of the analysis process (step 302) performed on the hypertext document. This is the same as a display process performed by a Web browser.

In a selection process (step 304), one of the anchors included in the displayed hypertext document in response to depression of the button/key or according to audio instruction information inputted through an audio recognition unit. For example, when the right arrow key of the buttons/keys is depressed, focus is rightwardly moved, so that the next anchor at the right-hand side of the selected anchor is then selected. For example, when an audio instruction to indicate "previous" is issued, focus is returned to the location of the immediately preceding anchor.

In an attribute selection judgement process (step 305), it is judged according to a result of the selection process (step 304) whether or not data corresponding to the anchor information is inputted.

In an attribute activation judgement process (step 306), it is judged according to information described in the hypertext document and to a result of the attribute selection process

(step 304) whether or not an anchor having an attribute, which corresponds to the selection process (step 304), is activated. According to a result of this judgement, it is decided which of a focus moving process (step 307) and an acquisition process (step 308) is performed. When a pointer of the anchor represents a link to a location within the document, the focus moving process (step 307) is performed. On the other hand, when this pointer represents a link to a location in another document, the acquisition process (step 308) is performed.

In the focus moving process (step 307), according to a result of the attribute activation process (step 306), the apparatus moving focus to a location in the hypertext document, which is designated by the anchor information selected in the selection process (step 304).

In the acquisition process (step 308), according to a result of the attribute activation judgement process (step 306), data designated by the selected anchor information is acquired from the server 310.

In the display process (step 309), the document is displayed according to a result of the focus moving process (step 307).

Next, an operation of performing the attribute selection judgement process by the first embodiment is described hereunder by using a flowchart of FIG. 3. The attribute selection judgement process (step 601) is to judge whether or

not an anchor having a selection attribute is selected. Then, the document is displayed.

In the anchor information selection process (step 602), it is judged whether or not an anchor having a selection attribute is selected. In a display process (step 603), the document is displayed according to a result of the process in step 602. Then, this operation is finished (step 604).

Next, an operation of performing the attribute activation judgement process in the first embodiment is described hereinbelow by using a flowchart of FIG. 4. The attribute activation judgement process is to judge whether or not an anchor having a selection attribute is activated, and to then perform the data acquisition process or the focus moving process according to a result of this judgement.

In an anchor information activation process (step 702), it is judged whether or not an anchor having a selection attribute is activated. If not activated, the operation is finished.

In a data acquisition judgement process (step 703), it is judged from information described in the hypertext document whether or not data indicated by anchor information holding a selection attribute is acquired from a server.

In the acquisition process (step 704), the data indicated by the anchor holding the selection attribute is acquired from the server. Then, this operation is finished (step 707).

In the focus moving judgement process (step 705), it is judged according to information described in the hypertext document whether or not focus is moved to a location on the hypertext document.

In the focus bringin process (step 706), focus is moved according to a result of the process performed in step 705. Then, this operation is finished (step 707).

As described above, in the case of the first embodiment of the present invention, the hypertext display apparatus is configured in such a manner as to display a hypertext document, and to select an anchor of the hypertext document according to an instruction from a user, and analyze the hypertext document, and acquire data, which is indicated by anchor information, from the server when an anchor corresponding to the selection means is selected and activated. Thus, target data can be displayed by performing a simple operation and selecting an anchor on the hypertext document.

Second Embodiment

A second embodiment of the present invention is a hypertext display apparatus adapted to display a hypertext document, and to select an anchor on the hypertext document according to an operation of a button by a user, and to analyze the hypertext document, and to extract anchor information therefrom, and to add a button key selection attribute to the anchor information of the hypertext by judging in the case, in which there is no

anchor information having the button/key selection attribute, whether or not the addition of this attribute thereto is performed, and to acquire from a server data, which is indicated by the anchor information, in the case that an anchor having a button/key selection attribute is selected and activated.

FIG. 5 is a block diagram illustrating a hypertext display apparatus that is the second embodiment of the present invention. In FIG. 5, the hypertext display device 201 is operative to analyze and display a hypertext document. The analysis means 202 is operative to analyze a hypertext document. The attribute automatic-addition judgement means 203 is operative to judge according to information described in a hypertext document whether or not a button selection attribute is automatically added to anchor information. The attribute automatic-addition judgement means 204 is operative to automatically add a button selection attribute to anchor information included in a hypertext document. The button/key selection means 205 is operative to select anchor information, which is included in a hypertext document, by the button/key. The attribute selection judgement means 206 is operative to judge according to a result of an operation, which is performed by the button/key selection means, whether or not an anchor having a button selection attribute is activated. The display means 207 is operative to display a hypertext document according to results of the processes performed by the analysis means and the

attribute selection judgement means.

The hypertext display apparatus 201 is configured so that a hypertext document is analyzed by the analysis means 202 and displayed by the display means 207. The attribute automatic-addition judgement means 203 judges from information described in the hypertext document whether or not the button selection attribute is added to the anchor information automatically included in the hypertext document. The attribute automatic-addition means 204 adds the button selection attribute to the anchor information included in the hypertext document. The button/key selection means 205 selects anchor information included in the hypertext document by a button/key. The attribute selection judgement means 206 judges according to a result of the process performed by the button/key selection means 205 whether or not an anchor having a button selection attribute is activated. The display means 207 displays a hypertext document according to results of the processes performed by the analysis means 202 and the attribute selection judgement means 206.

An operation of the hypertext display apparatus, which is configured as described above and the second embodiment of the present invention, will be described hereinbelow by referring to a sequence diagram of FIG. 6. The hypertext display apparatus 401 performs the analysis process on the hypertext document (step 402) and displays the hypertext document.

In the attribute automatic-addition judgement process (step 403), it is judged whether or not the button/key selection attribute is automatically added to a hypertext.

In the attribute automatic-addition process (step 404), the button-key selection attribute is automatically added to the hypertext.

In the display process (step 405), the hypertext document is displayed according to results of the analysis process (step 402) and the attribute selection judgement process (step 403).

In the button/key selection process (step 406), anchor information included in the hypertext document is selected in response to depression of the button/key.

In the attribute selection judgement process (step 407), it is judged according to a result of the button/key selection process (step 406) whether or not data corresponding to the anchor information is inputted.

In the display process (step 408), the hypertext document is displayed according to results of the analysis process (step 402) and the attribute selection judgement process (step 403).

Next, an operation of performing an attribute automatic-addition judgement process in the second embodiment is described hereinbelow by referring to a flowchart of FIG. 7. In the attribute automatic-addition judgement process (step 501), it is judged from information described in the hypertext document whether or not the button selection

attribute is automatically added to the anchor information included in the hypertext document.

In the attribute addition judgement process (step 502), it is judged according to information described in the hypertext document whether or not the attribute is automatically added to a hypertext document.

In the attribute addition judgement process (step 503), it is judged from the information described in the hypertext document whether or not button selection attributes are added to the anchor information in sequence from a top portion of the hypertext document.

In the process (step 505), it is judged from the information described in the hypertext document whether or not the button/key selection attribute is added to the anchor information from the hypertext document.

In the attribute process (step 504), according to information in steps 508 and 505, the button/key selection attribute is added to the anchor information included in the hypertext document.

As described above, in the case of the second embodiment of the present invention, the hypertext display apparatus is configured in such a way as to display a hypertext document, and to select an anchor provided in a hypertext document by a user's button/key operation, and to analyze and extract the hypertext document and to judge, when no anchor information

having the button/key selection attributes is present, whether or not the button/key selection attribute is added to the anchor information corresponding the hypertext document, and to then add the button/key selection attribute to the anchor information, and to acquire and display the data when an anchor having the button/key selection attribute is activated. Thus, a desired hypertext document can be displayed by performing a simple button operation thereby to select and activate the anchor.

Industrial Applicability

As described above, according to the present invention, there is provided a hypertext document display apparatus for displaying a hypertext document, which comprises display means for displaying a hypertext document, selection means for selecting an anchor on a hypertext document according to an instruction from a user, analysis means for analyzing a hypertext document and for extracting anchor information, attribute selection judgment means for judging according to outputs of the selection means and the analysis means whether or not an anchor having an attribute corresponding to the selection means is selected, attribute activation judgement means for judging according to an output of the attribute selection judgement means whether or not an anchor having an attribute corresponding to the selection means is activated,

and acquisition means for acquiring from a server data, which is indicated by the anchor information, according to an output of the attribute activation judgement means. Thus, only the anchor corresponding to the selection means can easily be selected. Even in the case of a personal digital assistant that has a small screen and a simple selection unit, data can be acquired by easily select a target anchor.

Further, there is provided another hypertext display apparatus for displaying a hypertext document, which comprises display means for displaying the hypertext document, selection means for selecting an anchor on the hypertext document according to an instruction from a user, analysis means for analyzing the hypertext document and for extracting anchor information, attribute activation judgment means for judging according to outputs of the selection means and the analysis means whether or not an anchor having an attribute corresponding to the selection means is activated, and focus moving means for moving focus to a location in a hypertext document, which is designated by anchor information selected by the selection means. Thus, target data can easily be displayed by moving focus only to the location of the anchor corresponding to the selection means.

Furthermore, there is provided another hypertext document display apparatus for displaying a hypertext document, which comprises display means for displaying the hypertext document,

button/key selection means for selecting an anchor on the hypertext document according to an instruction from a user, analysis means for analyzing the hypertext document and for extracting anchor information, attribute automatic-addition judgment means for judging, in a case where it is found as a result of the analysis that no anchor has the button/key selection attribute, whether or not the button/key selection attribute is added to anchor information of a hypertext document, attribute automatic-addition means for automatically adding button/key selection attributes to anchor information of the hypertext document in sequence from a top portion thereof according to an output of the attribute automatic-addition judgement means, and attribute selection judgement means for judging according to outputs of the analysis means and the button/key selection means whether or not an anchor having a button/key selection attribute is selected. Thus, this hypertext display apparatus can selectively impart attributes corresponding to buttons/keys to anchors and can easily select only the anchors corresponding to the button/key.

Further, there is provided another hypertext display apparatus for displaying a hypertext document, which comprises display means for displaying the hypertext document, button/key selection means for selecting an anchor on the hypertext document according to a button/key instruction issued by a user, analysis means for analyzing the hypertext document and for

extracting anchor information, attribute automatic-addition judgment means for judging, in a case where it is found as a result of the analysis that no anchor has the button/key selection attribute, whether or not the button/key selection attribute is added to anchor information of the hypertext document, attribute automatic-addition means for automatically adding button/key selection attributes to anchor information of the hypertext document in the order, in which hypertext documents are displayed, according to a result of a judgement by the attribute automatic-addition judgement means, and attribute selection judgement means for judging according to outputs of the analysis means and the button/key selection means whether or not anchor information, which includes information corresponding to the selection means, is selected. Thus, this hypertext display apparatus can selectively impart attributes corresponding to buttons/keys to anchors and can easily select only the anchors corresponding to the button/key.

CLAIMS

1. A hypertext display apparatus for displaying a hypertext document, comprising:

display means for displaying the hypertext document;

selection means for selecting an anchor on the hypertext document according to an instruction from a user;

analysis means for analyzing the hypertext document and for extracting anchor information;

attribute selection judgment means for judging according to outputs of said selection means and said analysis means whether or not an anchor having an attribute corresponding to said selection means is selected;

attribute activation judgement means for judging according to an output of the attribute selection judgement means whether or not an anchor having an attribute corresponding to said selection means is activated; and

acquisition means for acquiring from a server data, which is indicated by the anchor information, according to an output of said attribute activation judgement means.

2. A hypertext display apparatus for displaying a hypertext document, comprising:

display means for displaying the hypertext document;

selection means for selecting an anchor on the hypertext

document according to an instruction from a user;

analysis means for analyzing the hypertext document and for extracting anchor information;

attribute activation judgment means for judging according to outputs of said selection means and said analysis means whether or not an anchor having an attribute corresponding to said selection means is activated; and

focus moving means for moving focus to a location in a hypertext document, which is designated by anchor information selected by said selection means.

3. The hypertext display apparatus according to claim 1 or 2, wherein said selection means is a means for allowing a user to depress a button/key thereby to select an anchor on the hypertext.

4. The hypertext display apparatus according to claim 1 or 2, wherein said selection means is a means for allowing a user to select an anchor on a hypertext by utilizing audio.

5. A hypertext display apparatus for displaying a hypertext document, comprising:

display means for displaying the hypertext document;

button/key selection means for selecting an anchor on the hypertext document according to an instruction from a user;

analysis means for analyzing the hypertext document and for extracting anchor information;

attribute automatic-addition judgment means for judging, in a case where it is found as a result of the analysis that no anchor has the button/key selection attribute, whether or not the button/key selection attribute is added to anchor information of the hypertext document;

attribute automatic-addition means for automatically adding button/key selection attributes to anchor information of the hypertext document in sequence from a top portion thereof according to an output of said attribute automatic-addition judgement means; and

attribute selection judgement means for judging according to outputs of said analysis means and said button/key selection means whether or not an anchor having a button/key selection attribute is selected.

6. A hypertext display apparatus for displaying a hypertext document, comprising:

display means for displaying the hypertext document;

button/key selection means for selecting an anchor on the hypertext document according to a button/key instruction issued by a user;

analysis means for analyzing the hypertext document and for extracting anchor information;

attribute automatic-addition judgment means for judging, in a case where it is found as a result of the analysis that no anchor has the button/key selection attribute, whether or not the button/key selection attribute is added to anchor information of the hypertext document;

attribute automatic-addition means for automatically adding button/key selection attributes to anchor information of the hypertext document in an order, in which hypertext documents are displayed, according to a result of a judgement by said attribute automatic-addition judgement means; and

attribute selection judgement means for judging according to outputs of said analysis means and said button/key selection means whether or not anchor information, which includes information corresponding to said selection means, is selected.

ABSTRACT

Hypertext documents are analyzed by analysis means (102). Thus, anchor information is extracted therefrom. According to results of analysis, anchor information is selected by selection means (103). It is judged by attribute selection judgment means (105) according to the selected result whether or not an anchor corresponding to the selection means (103) is selected. Attribute activation judgment means (106) then judges whether or not an anchor corresponding to the selection means is activated. When activated, acquisition means (107) acquires data, which is indicated by anchor information from a server (109). Alternatively, focus moving means (108) moves focus to a location in a hypertext document indicated by the anchor information. Thus, only the anchor corresponding to the selection means, such as buttons/keys, can easily be selected. Target data can be quickly displayed.

FIG. 1

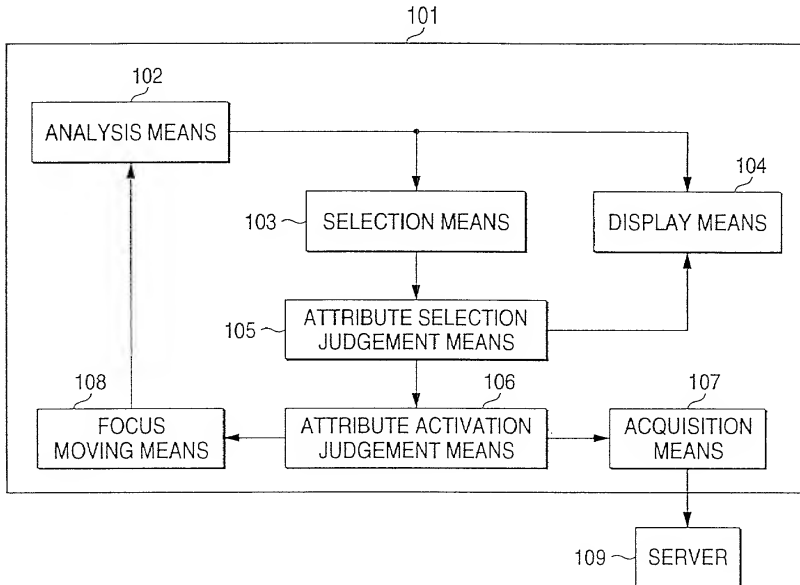


FIG. 2

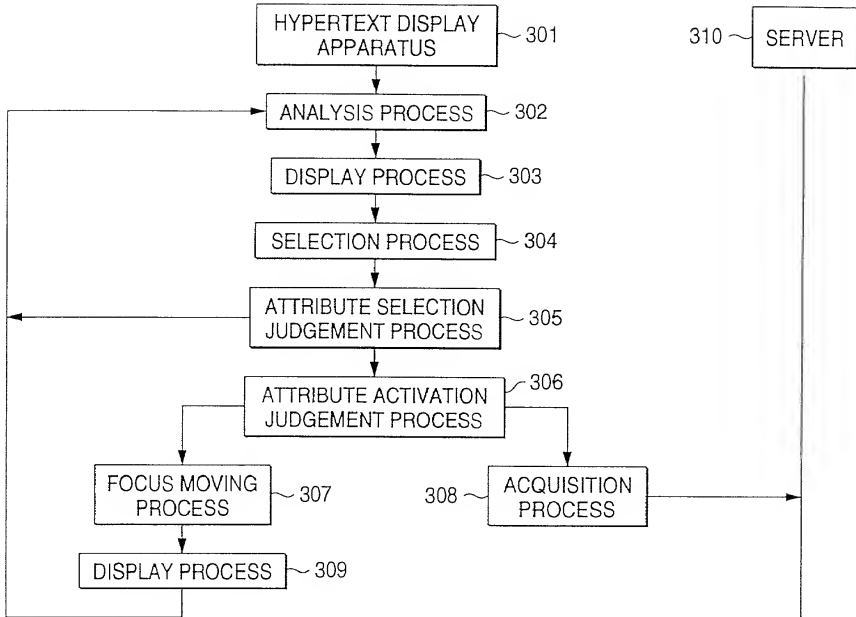


FIG. 3

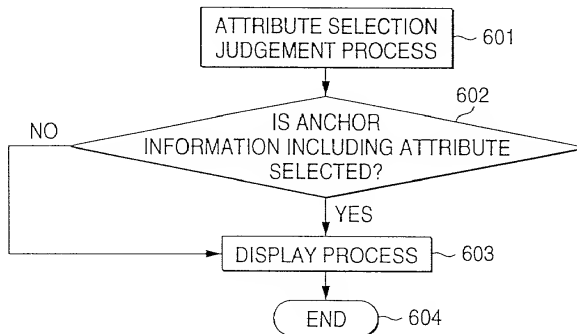


FIG. 4

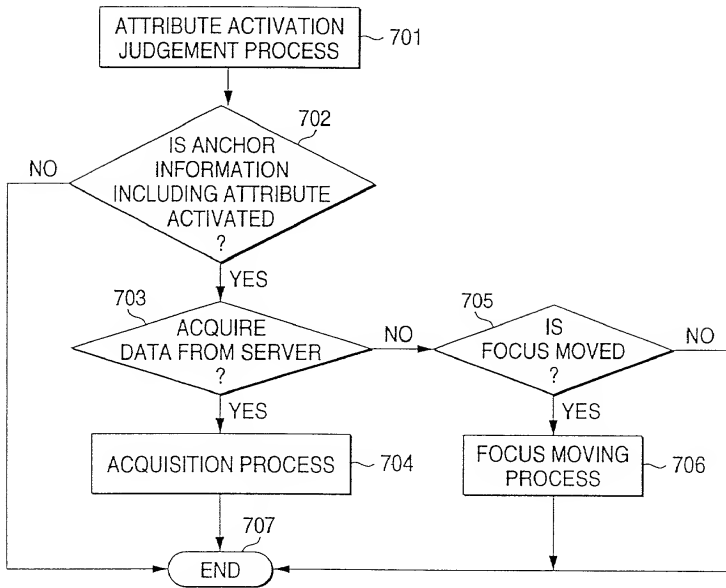


FIG. 5

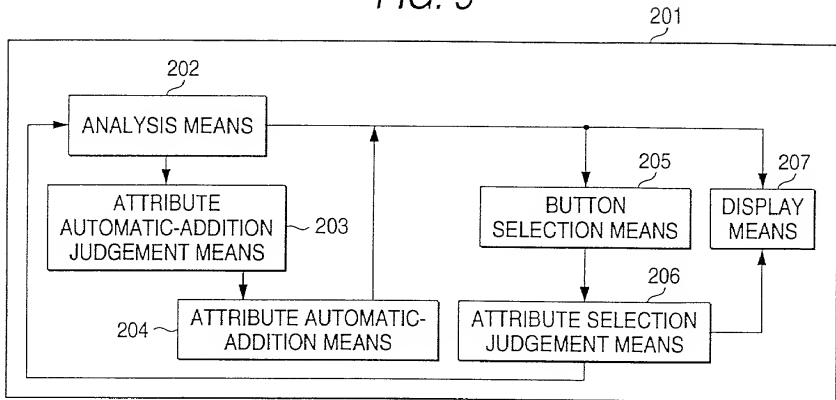


FIG. 6

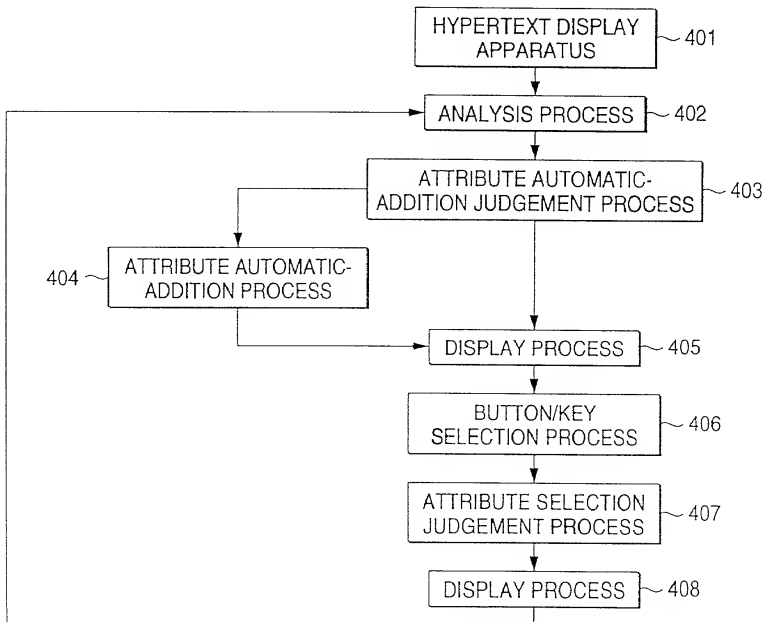
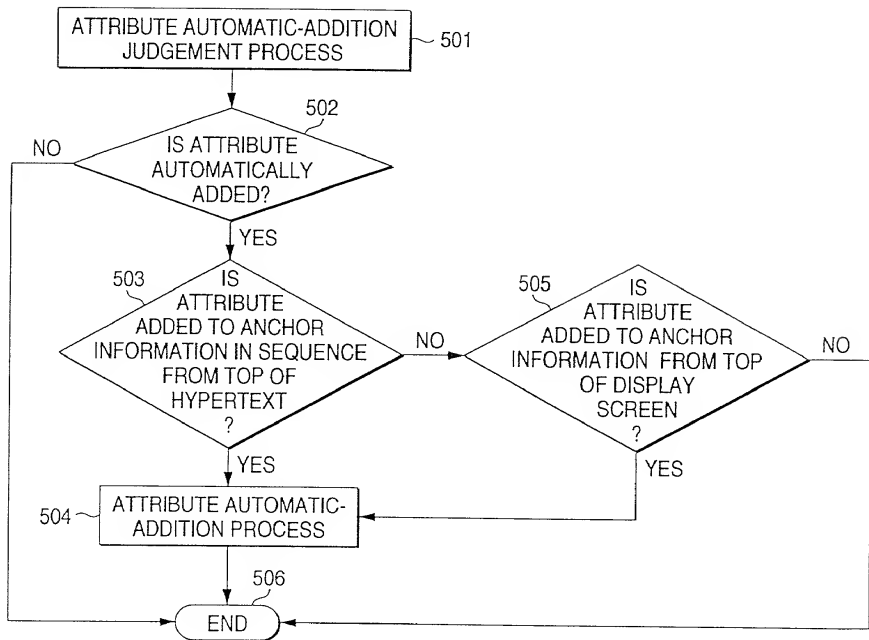


FIG. 7



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UTILITY OR DESIGN
PATENT APPLICATION**☐ Declaration Submitted with Initial Filing
☒ Declaration Submitted after Initial Filing

Attorney Docket Number	32908
First Named Inventor	Hidehiko SHIN
COMPLETE IF KNOWN	
Application Number	09/622,662
Filing Date	August 21, 2000
Group Art Unit	
Examiner Name	

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

HYPERTEXT DISPLAY APPARATUS

(Title of the Invention)

the specification of which

☐ is attached hereto

OR

☒ was filed on (MM/DD/YYYY)

December/21/1999

as United States Application Number or PCT International

Application Number PCT/JP99/07173 and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code §119 (a)-(d) or §365(b) of any foreign application(s) for patent or inventor's certificate, or §365 (a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
Pat. Hei. 10-362919	Japan	December 21, 1998	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority sheet attached hereto:

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(Page 1 of 6)

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U.S. Parent Application Number	PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)

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As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

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Charles B. Gordon	16923	Howard G. Shimola	26232
William C. McCoy, Jr.	16885	Jeffrey J. Sopko	27676
Richard H. Dickinson, Jr.	18622	John P. Murtaugh	34226
Thomas P. Schiller	20677	James M. Moore	32923
David B. Deidoma	22841	David E. Spaw	34732
Joseph J. Corso	25845	Michael W. Garvey	35878

☒ Additional registered practitioner(s) named on a supplemental sheet attached hereto.

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		Fax	(216) 579-6073

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Sole or First Inventor: ☐ A petition has been filed for this unsigned inventor

Given Name	Hidehiko	Middle Initial	Family Name	SHIN	Suffix e.g. Jr.
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Inventor's Signature	Hidehiko Shin	Date	October 12, 2000
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Residence: City	Osaka	State	Country	Japan	Citizenship	JP
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Inventor's Signature	<i>Atsunobu Kato</i>				Date	October 12, 2000	
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Inventor's Signature	<i>Masaharu Nakatsuchi</i>				Date	October 12, 2000	
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Name of Additional Joint Inventor, if any:				<input type="checkbox"/> A petition has been filed for this unsigned inventor			
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Post Office Address							
City	Kanagawa	State		Zip		Country	Japan
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Given Name		Middle Initial		Family Name		Suffix	
Inventor's Signature					Date		
Residence: City		State		Country		Citizenship	
Post Office Address							
Post Office Address							
City		State		Zip		Country	
Name of Additional Joint Inventor, if any:				<input type="checkbox"/> A petition has been filed for this unsigned inventor			
Given Name		Middle Initial		Family Name		Suffix	
Inventor's Signature					Date		
Residence: City		State		Country		Citizenship	
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INFORMATION
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